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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,859	11/18/2003	Dave James Cotton	87401.1740	3720

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EXAMINER

YEAGLEY, DANIEL S

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/714,859	Applicant(s) COTTON, DAVE JAMES	
	Examiner Daniel Yeagley	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the reference has been cited by the examiner on form PTO-892, it has not been considered.

Specification

2. The abstract of the disclosure is objected to because the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.

Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities:

a. Paragraph [0026]; numeral [20] should be changed to hub; numeral --19--.

b. Paragraph [0032]; the two occurrence of numeral [50] should be changed to cutting head numeral --21--.

c. Paragraph [0034]; numeral [50] should be changed to cutting head numeral --21--.

d. Paragraph [0036]; numeral [22] should be changed to cutting head numeral --21--.

Appropriate corrections are required.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,

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- a. the “propulsion means **electrically controllable using electrical control means**” as cited in claim 1,
 - b. the “cutting means and actuating means **electrically controllable using electrical control means**” as cited in claim 7,
 - e. the “**chassis, electric motors and clutch electrically controllable using electrical control means**” as cited in claim 26,
 - c. the “hydraulic ram powered by **hydraulic fluid pressurized by electrically operated pump mounted on the chassis and controllable by a control means**” as cited in claim 8,
 - d. the “**pump connected to an electrical cable**” as cited in the claim 9,
 - e. the “**propulsion means, the cutting means and the actuator means connected to the electrical cable**” as cited in claim 10, and
 - f. the “**drive units pivoted by a/the hydraulic ram powered by fluid supplied by the hydraulic pump mounted on the chassis**” as cited in claim 11;
- must all be shown or the feature(s) canceled from the claim(s).
- g. the “**spaced apart charged coupled devices and sampling means**” as cited in claims 19 and 20;

these features must all be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

5. The drawings are objected to because they fail to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: numeral [50].

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6. The drawings are further objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “25” has been used to designate both track (figure 1 and [Para. 0024]) and a sprocket (figure 4 and [Para. 0024]).

7. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. Claim 5 is objected to because the term “*the* actuator means” lacks antecedent basis.

9. Claim 23 is objected to because the term “*the* sensor means” lacks antecedent basis.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1 – 19 and 22 – 24 are rejected under 35 U.S.C. 112, first paragraph, because:

a. Regarding claims 1 and 22, the specification, while being enabling for “a vehicle having a second operating mode in which the motors 27 and 27’ are engaged with each other via the clutch and spindles 28, 28’ and the second motor 27’ is used to provide motive power output to the caterpillar track through the spindles, clutch and through the inactive motor 27”, but does not reasonably provide enablement for “the second motor providing motive output via the first electric motor 27”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The specification as read states the second motor 27’ is used to provide motive power output and although the first motor is still rotatable with some slight frictional drag, the use of the smaller motor allows precise control of the position of the vehicle and control of the position of the cutting tool, but the larger motor 27 is rendered inoperative (kept inactive; paragraph. 24 and 33).

b. Regarding claims 2 and 3, the specification, while being enabling for “the first motor 27 connected to the sprocket 25 which engages the caterpillar track via a gear box 26”, does not reasonably provide enablement for “the first motor 27 being directly connected to the sprocket 25”. see paragraph 24.

- c. Regarding claim 3, the specification, while being enabling for “a plurality of drive units each having a pair of motors driving a track”, does not reasonably provide enablement for “a plurality of pairs of motors in a plurality of tracked drive units in each of which the first motor is directly connected to a sprocket”.
- d. Regarding claims 19 and 20, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The features of the “spaced apart charged coupled devices and sampling means” were not describe anywhere in the specification to significantly render what the metes and bounds are for such a limitation.
12. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
13. Claims 11, 12, 15, 16, and 22 – 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- a. Regarding claims 11 and 12, it is unclear if the limitation drawn to “**a/the** hydraulic ram” is further drawn to the ram 44 of the cutter head or if applicant is trying to claim another ram (not shown; as referenced in paragraph 26).
- b. Regarding claim 22, the terms “its” are considered indefinite.

- c. Regarding claim 15, is objected to because it is dependent upon itself and further it is unclear if the actuator means is drawn to the actuator means of the cutting head or the actuator means drawn to the drive units.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1, 7, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by McCracken '876.

McCracken discloses a method; as best understood, of moving a vehicle in a first operating mode and switching to a second operating mode while carrying out further inspection and or restoration work on a pipeline (mine shaft) (column 1-6), wherein McCracken shows a vehicle; as best understood, comprising a chassis having propulsion means (caterpillar tracked drive units 12; figure 1), at least one pair of electric motors 27 and 303 of differing operating speed output ranges connectable to a clutch 308 operable to engage and disengage the electric motors, wherein the vehicle includes a cutting means 11 (column 4) comprising a cutting tool mounted to the chassis and an actuator (ram 22 for moving the cutting means), such that the motors, clutch and actuator are electrically controlled.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1, 6 – 13, 15 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holland '136 in view of McCracken '876.

Holland discloses a method of inspecting a pipe; as best understood, by moving a vehicle in a first operating mode and having a second operating mode, wherein Holland shows a vehicle; as best understood, comprising a chassis with pivotally connected propulsion means (three caterpillar tracked drive units 20 spaced 120 degrees apart; figures 1, 4 – 8; pages 3-9), wherein the propulsion means are driven by a hydraulic actuator means (ram, paragraph 88) and pump (paragraph 99) connectable by a cable 5 dragged behind the vehicle (paragraph 54), and wherein the propulsion means, the actuator means, a cutting means, and at least one pair of electric motors 34 are electrically controlled, and wherein a motor is directly connected to a sprocket 36 (via a chain), wherein the actuator means are operable to move a sensor means relative to the chassis, such that actuator means are engaged with the sensor means with one part of the interior surface of the pipe which stabilize the vehicle during a cutting operation and wherein the sensor means about the longitudinal axis of the vehicle are located adjacent the interior surface of a pipe and provides a signal of the presence of a lateral opening and includes a camera system with light emitting devices (i.e., charged coupled device?) which is sent to a viewing apparatus to provide three dimensional image of the interior of the pipe (sampling means?) and include a pair

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of spaced apart cameras mounted to the chassis (paragraph 51) and although Holland discloses at least a pair of variable electric motors of differing operating speed output ranges motors 34 or first and second motors (not shown; paragraph 79) disposed in either the body 50 or on the mule (vehicle) but failed to disclose the pair of motors connectable by a clutch.

McCracken as stated above discloses a vehicle comprising a chassis having a propulsion means (caterpillar tracked drive units 12; figure 1) with at least one pair of electric motors 27 and 303 of differing operating speed output ranges connectable to a clutch 308 operable to engage and disengage the electric motors and includes a cutting means 11, such that the motors, clutch and actuator are electrically controlled.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the propulsion means of Holland tracked drive units with a pair of electric motors connectable by a clutch as suggested by McCracken to further enhance the controllability and movement of the tracked drive units for moving and positioning the vehicle as taught by McCracken.

18. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holland '136 as modified by McCracken '876 in further view of Yamauchi et al '278.

Holland discloses a method of inspecting a pipe by moving a vehicle in a first operating mode and includes a second operating mode as modified by McCracken, wherein the vehicle of Holland discloses a sensor means located adjacent the interior surface of a pipe which provides a signal of the presence of a lateral opening but failed to disclose the sensor means comprising a capacitive sensor.

Yamauchi discloses a vehicle for inspecting and restoring a pipe that incorporates a sensor means which located adjacent the interior surface of a pipe to provide a signal of the presence of a lateral opening utilizing a capacitive sensor (abstract and figure 1 and 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the sensor means of Holland track driven vehicle with an additional or alternative sensing means which utilizes a capacitive sensor in order to easily locate the lateral branch pipes in a relined pipe system as suggested by Yamauchi.

Allowable Subject Matter

19. Claims 2 – 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mason et al '436, Davis et al '908, Jurgelohmann et al '108, Himmler '922 Long, Jr. '721 and Schempf et al '682 disclose a vehicle for inspecting a pipe.


21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Yeagley whose telephone number is (571)-272-6655. The examiner can normally be reached on Mon. - Fri; first Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D Morris can be reached on (571) - 272 - 6651. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.Y.


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